

Ship March 20 Blue

Work Order ID 79653

79653

Page 1

February-01-12 11:23:36 AM

Item ID: D206-642-341

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Replacement Skidtube

Start Date: 31/01/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 20/03/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: M.L.J.

Date: 12/02/10 Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

Draw Nbr

Revision Nbr

D2650

F

100

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile and create labels per PPP D206-642-341 CHG003

N/A

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|---------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval* QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
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| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

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Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 110 | Skidtubes | 0.00 | | | | | | | |
| *110* | | | | | | | | | |
| Skidtubes | Memo | 0.00 | | | | | | | |
| Skidtubes | 1-Deburr Fwd edge of tube | | | | | | | | |
| | 2-Remove ridge on inside of Fwd edge of tubeas per Dwg D2650 | | | | | | | | |
| | 3-Weld Fwd Cap as per Dwg D2650. Use aluminum rod. Grind D2647 to fit as required. A/RAluminum Rod <u>M119785</u> | | | | | | | | |
| | 4-Grind weld flush to cap on top surface only. | | | | | | | | |
| | 5-Cut aft end to lenght as per dwg D2650 | | | | | | | | |
| | 6-Drill pilot holes using drill Jig DT8168A (A,& B) and DT8025. Open to Ø0.312" | | | | | | | | |
| | 7-Drill holes for wearplates using DT 8028-5. Open to Ø 0.297". | | | | | | | | |
| | 8-Open Aft Cap Hole using #6 Drill Bit | | | | | | | | |
| | 9-Open holes for Tow Ring to Ø0.625" as per Dwg D2650, D2650-5 Drilling Detail | | | | | | | | |
| | 10-Remove inner indexing ridge on aft end of skidtubeas per Dwg D2650 | | | | | | | | |
| | 11-Deburr and Blow out all chips form inside the tube | | | | | | | | |

CF 12-2-14

1 CF 12-2-15

PTO

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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| W/O: 79653 | | WORK ORDER CHANGES | | | | | |
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| 12-2-16 | 110 | while removing wear inner insulating ridge employees dis- used digard and used 1.00" instead of 0.75" | CP 12.02.16 DS/642 | Acceptable | CP DP 12-2-17 | N/A | CP 12.02.16 DS/642 | mbh 12.02.16 |
| | | RC; New part time employee w/ lack of experience. | CP 12.02.16 | | CP DP 12-2-17 | N/A | CP 12.02.16 | mbh 12.02.16 |
| | | | | | | | | |

NOTE: Date & initial all entries

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N900040100Setup Start ***NS1***

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Stop ***NS2***

Item Name: Replacement Skidtube

Start Date: 31/01/2012 Start Qty: 1.00

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Cust Item ID:

Required Date: 20/03/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|---|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 115 | QC5- Inspect part completeness to step on W/O | 0.00 | | | | | | | |
| *115* | | | | | | | | | |
| QC | Memo | 0.00 | | | | | | | |
| Quality Control | | | | | | | | | |
| 120 | Chemical Conversion Coat per QSI005 4.1 | 0.00 | | | | | | | |
| *120* | | | | | | | | | |
| HandFinish | Memo | 0.00 | | | | | | | |
| Hand Finishing | | | | | | | | | |
| 125 | QC3- Inspect Part Finish | 0.00 | | | | | | | |
| *125* | | | | | | | | | |
| QC | Memo | 0.00 | | | | | | | |
| Quality Control | | | | | | | | | |

ND 12-2-17

CF 12-2-17

1 SAD 12-02-17

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 130 | | 0.00 | | | | | | | |
| *130* | Skidtubes | | | | | | | | |
| Skidtubes | Memo | 0.00 | | | | | | | |
| Skidtubes | 1-Open holes to finished size as per Dwg D2650, D2650-5 Drilling Detail (without cutting fluid) | | | | | | | | |
| | 2-Countersink crossbolt spacer holes as per Dwg D2650(without cutting fluid) | | | | | | | | |
| | 3-Deburr. Blow out chips. Grind alodine off around crossbolt spacer. | | | | | | | | |
| | 4-Bond D2654-5 web in place as per QSI 015Ensure holes line upAllow 12 Hrs. cure time before cutting | | | | | | | | |
| | Start Date: <u>12-02-17</u> Time: <u>2:00</u> | | | | | | | | |
| | Finish Date: <u>12-02-21</u> Time: <u>10:30</u> | | | | | | | | |
| | A/RSikaflex-291 <u>M119994</u> | | | | | | | | |
| | Sikaflex expiry date: <u>2012-08-13</u> | | | | | | | | |
| 140 | QC5- Inspect part completeness to step on W/O | 0.00 | | | | | | | |
| *140* | | | | | | | | | |
| QC | Memo | 0.00 | | | | | | | |
| Quality Control | | | | | | | | | |

BB 12/02/17

SAD 12-02-17

1 Q BE 12/02/21

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

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79653

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Accept

N900040100

Setup Start ***NS1***

Stop *NS2*

Item Name: Replacement Skidtube

Start Date: 31/01/2012 **Start Qty:** 1.00

*** 1 ***

Cust Item ID:

Required Date: 20/03/2012 **Req'd Qty:** 1.00

*** 1 ***

Customer:

Reference:

Approvals: **Process Plan:** **Date:** **Tooling:** **Date:**

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/
Work Center ID

Operation Description

Set Up/ Run Hours

Tool ID

Tool #

Plan Code

Accept
Qty

Reject
Qty

Reject Number

Insp. Stamp

150

0.00

150

Skidtubes

0.00

Skidtubes

Skidtubes

Memo

1-Prep per QSI 005 and Insert cross bolt spacers D2649. Weld as per QSI 004 and Dwg D2650. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.
A/RAluminum Rod *m/20164* *BE 12/02*

2-Grind welds flush as per Dwg D2650. Masking Tape access to inside of the Skidtube

3-Counterbore 5/16" x 0.750" deep as per Dwg D2650Debur

4- Install nut plate as per dwg

170

QC10- Inspect visual per QSI004- ground welds

0.00

170

QC

Memo

0.00

Quality Control

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Item ID: D206-642-341

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N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Replacement Skidtube

Start Date: 31/01/2012 Start Qty: 1.00

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Required Date: 20/03/2012 Req'd Qty: 1.00

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

180 QC5- Inspect part completeness to step on W/O 0.00

180

QC

Memo

0.00

Quality Control

w/ 12.02.24 (1)

190 Pressure Wash per QSI005 4.3 0.00

190

HandFinish

Memo

0.00

Hand Finishing

Brush alodine tube on crossbolt spacer area, do not acid etch, do not dip tube in tank.

1 (2P/M/Feb. 27/2012)

205 0.00

205

SprayPaint

Memo

0.00

Spray Painting

PRIME B 118319
DELFLEET BLUE B 118395
CLEAR DELFLEET B 118093

AB 12-3-7

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

215

QC14- Inspect Spray Paint

0.00

215

QC

Memo

0.00

Quality Control

8/2/03/08

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
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Stop ***NR2***

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|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

220

0.00

220

HandFinishing

HandFinish

Memo

0.00

Hand Finishing

1-Install inserts & wearpads as per dwg D2922. Use a drop of Sikaflex inside insert holes before installing wearpad/wearplate.
A/RSikaflex-291 M119433
Sikaflex expiry date: 12/10

2-Install O-Rings D2651-3 on plugs D2651-1 with Petroleum Jelly and install plugs as per Dwg D2650. Clean excess adhesive

3-Install MS27039-4-06 Screw

4-Inspect for foreign object per QSI 024

5-Install D2646 Aft Cap and seal with SikaflexClean excess adhesive
A/RSikaflex-291 M119433
Sikaflex expiry date: 12/10

6-Wing Walk as per Dwg D2650-5 and QSI 005 4.4

Batch:

M120125

1XØ m/d 12/03/16

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|--------------------------------|--|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 230 | QC3- Inspect Part Finish | 0.00 | | | | | | | |
| *230* | | | | | | | | | |
| QC | Memo | 0.00 | | | | | | | |
| Quality Control | | | | | | | | | |
| 240 | QC5- Inspect part completeness to step on W/O | 0.00 | | | | | | | |
| *240* | | | | | | | | | |
| QC | Memo | 0.00 | | | | | | | |
| Quality Control | | | | | | | | | |
| 250 | Packaging | 0.00 | | | | | | | |
| *250* | | | | | | | | | |
| Packaging | Memo | 0.00 | | | | | | | |
| Packaging | Identify and pack for shipping as per PPP D206-642-341 | | | | | | | | |
| | Location: _____ | | | | | | | | |
| | PPP Rev: <u>PPP 79635</u> | | | | | | | | |

1 DL 12 3-191 DL 12 3-19643/20 ①

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Stop ***NR2***

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|--------------------------------|---|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 260 | QC21- Final Inspection - Work Order Release | 0.00 | | | | | | | |
| *260* | | | | | | | | | |
| QC | Memo | 0.00 | | | | | | | |
| Quality Control | | | | | | | | | |

12/03-21

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

Picklist Print

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Page 1

Work Order ID: 79653

79653

Parent Item: D206-642-341

D206-642-341

Parent Item Name: Replacement Skidtube

Start Date: 31/01/2012

Required Date: 20/03/2012

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev: H05.10.11 Added D3429-1 per CHG004KJ/CP/JLM
 IPP Rev: I 08-09-29 revF as per dwg DD verified by: EC Est Rev: J 09-03-02 as per DSI9440 rev.a DD verified by: EC IPP rev K 10.08.03 chg ms27039-1-08 for "C" type EC verified by DD

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|

AN960JD416

NAS1149D0463J

Purchased

No

Each

0.0000

1

AN960.ID416

Washer

M118384

**

1 M-12/03/16

CCR264SS3-3

Purchased

No

Each

867.0000

2

CCR264SS3-3

Cherry Rivet

**

SAD

12-02-21

Location

Loc Qty

Loc Code

ST331

867

113973

2

117849

135

119017

730

2

CR3212-4-03

Purchased

No

Each

1,632.000

2

CR3212-4-03

Cherry Rivet

**

SAD

12-02-21

Location

Loc Qty

Loc Code

FP002

642

114859

642

ST331

990

110139

2

119017

988

2

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

Picklist Print

Page 2

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Work Order ID: 79653

79653

Parent Item: D206-642-341

D206-642-341

Parent Item Name: Replacement Skidtube

Start Date: 31/01/2012

Required Date: 20/03/2012

Start Qty: 1.00

Required Qty: 1.00

D2620

Manufactured No

Each

58.0000

D2620

Skidtube, 206 Skidtube

B979545

**

1
①

CF 12-2-16

Location

Loc Qty

Loc Code

LG

58

71617

2

76820

6

77996

10

77999

10

78000

10

79542

10

79543

10

D2647

Manufactured No

Each

120.0000

D2647

Cap

**

1

BE 12/2/14

Location

Loc Qty

Loc Code

LG002

120

73826

12

75482

108

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

Picklist Print

Page 3

February-01-12 11:23:41 AM

Work Order ID: 79653

79653

Parent Item: D206-642-341

D206-642-341

Parent Item Name: Replacement Skidtube

Start Date: 31/01/2012

Required Date: 20/03/2012

Start Qty: 1.00

Required Qty: 1.00

D2649

Manufactured No

Each

731.0000

19

D2649

Cross Bolt Spacer

**

BB 12/02/07

Location

Loc Qty

Loc Code

LG

415

77574

15

78019

400

19

LG001

316

65317

1

68224

2

68507

11

71355

2

72704

2

72841

11

73390

8

73857

21

73858

53

73859

4

73860

4

78020

197

D2654-5

Manufactured No

Each

4.0000

1

D2654-5

Web

**

SAD

12-02-17

Location

Loc Qty

Loc Code

LG

4

78832

4

380057

17

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 79653

79653

Parent Item: D206-642-341

D206-642-341

Parent Item Name: Replacement Skidtube

Start Date: 31/01/2012

Required Date: 20/03/2012

Start Qty: 1.00

Required Qty: 1.00

D2680-041

Manufactured No

Each

101.0000

1

D2680-041

Nut Plate

**

SAD 12-02-21

Location

Loc Qty

Loc Code

ST013

5

75479

5

ST019

96

76790

96

①

MS27039C1-08

Purchased No

Each

1,542.000

56

MS27039C1-08

SCREW

**

M/L 12/03/16

Location

Loc Qty

Loc Code

FP002

1

116022

1

ST292

1000

120308

1000

ST293

541

116373

3

118077

14

118159 ✓

412

119309

112

56

ALS4-1032-130

Purchased No

220

Each

2,033.000

54

54

AI S4-1032-130

Insert

**

M/L 12/03/16

Location

Loc Qty

Loc Code

ST280

944

119084

944

ST281

1089

119632

89

120410

1000

54

120181

February-01-12 11:23:41 AM

Shop Packet Print

Page 4

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

Picklist Print

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February-01-12 11:23:41 AM

Work Order ID: 79653

79653

Parent Item: D206-642-341

D206-642-341

Parent Item Name: Replacement Skidtube

Start Date: 31/01/2012

Required Date: 20/03/2012

Start Qty: 1.00

Required Qty: 1.00

AN960C10L NAS1149C0332 Purchased No

220 Each 0.0000 54 54

*AN960C10I *

washer

120648

**

54 m-l 12/03/16

AN960JD10L NAS1149D0332J Purchased No

220 Each 0.0000 2 2

*AN960.ID10I *

Washer

120644

**

2x m-l 12/03/16

D2646 Manufactured No

220 Each 74.0000 1

D2646

Aft Cap

**

m-l 12/03/16

Location

Loc Qty

Loc Code

FP002

74

62678

5

68280

5

70945

1

71070

2

73294

1

73825

60

78018

1

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

Picklist Print

February-01-12 11:23:41 AM

Work Order ID: 79653

79653

Parent Item: D206-642-341

D206-642-341

Parent Item Name: Replacement Skidtube

Start Date: 31/01/2012

Required Date: 20/03/2012

Start Qty: 1.00

Required Qty: 1.00

D2651-1

Manufactured No

220 Each

705.0000

14

14

D2651-1

Plug

79234

**

14 m-l 12/03/16

Location

Loc Qty

Loc Code

FP001

699

57869

1

66445

10

69018

2

70827

2

70839

8

71037

11

72864

25

73827

23

78584

317

FP-A

6

77559

22

78124

284

D2651-3

Manufactured No

220 Each

2,383.000

14

14

D2651-3

O-Ring

**

m-l 12/03/16

Location

Loc Qty

Loc Code

FP001

383

61962

12

73828

371

FP-A

2000

78126 ✓

2000

14

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

Picklist Print

February-01-12 11:23:41 AM

Work Order ID: 79653

79653

Parent Item: D206-642-341

D206-642-341

Parent Item Name: Replacement Skidtube

Start Date: 31/01/2012

Required Date: 20/03/2012

Start Qty: 1.00

Required Qty: 1.00

D3535-11

Manufactured No

220

Each

14.0000

1

1

D3535-11

Wearshoe

**

m-f 12/03/16

Location

Loc Qty

Loc Code

FP001

14

70879

1

71284

13

D3535-23

Manufactured No

220

Each

29.0000

1

1

D3535-23

Wearshoe

**

m-f 12/03/16

Location

Loc Qty

Loc Code

FP001

29

73314

18

74508

11

D3535-35

Manufactured No

220

Each

14.0000

1

1

D3535-35

Wearshoe

**

80332

1 m-f 12/03/16

Location

Loc Qty

Loc Code

FP001

14

67598

1

70815

1

74509

12

D3536-11

Manufactured No

220

Each

10.0000

1

1

D3536-11

Gasket

**

80006

1 m-f 12/03/16

Location

Loc Qty

Loc Code

FP002

10

46649

1

46715

4

65574

1

71283

4

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

Picklist Print

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Page 8

Work Order ID: 79653

Parent Item: D206-642-341

Parent Item Name: Replacement Skidtube

79653

D206-642-341

Start Date: 31/01/2012

Required Date: 20/03/2012

Start Qty: 1.00

Required Qty: 1.00

D3536-23 Manufactured No

220 Each

28.0000

1 1

D3536-23

Gasket

**

m-l 12/03/16

Location

Loc Qty

Loc Code

FP002

28

43406

1

73312

15

74510

12

D3536-35 Manufactured No

220 Each

25.0000

1 1

D3536-35

Gasket

**

m-l 12/03/16

Location

Loc Qty

Loc Code

FP002

25

73313

7

74511

18

D3537-1 Manufactured No

220 Each

33.0000

6 6

D3537-1

Wearpad

**

79834

6 m-l 12/03/16

Location

Loc Qty

Loc Code

FP002

33

69817

5

77560

28

D3537-3 Manufactured No

220 Each

30.0000

1 1

D3537-3

Wearpad

**

m-l 12/03/16

Location

Loc Qty

Loc Code

FP002

30

74500

25

76986

5

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

Picklist Print

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February-01-12 11:23:41 AM

Work Order ID: 79653

79653

Parent Item: D206-642-341

D206-642-341

Parent Item Name: Replacement Skidtube

Start Date: 31/01/2012

Required Date: 20/03/2012

Start Qty: 1.00

Required Qty: 1.00

MS27039-4-06

Purchased

No

220

Each

255.0000

1

1

MS27039-4-06

Screw

**

Location

Loc Qty

Loc Code

ST292

255

119075 ✓

255

M-1 12/03/12

February-01-12 11:23:41 AM

Shop Packet Print

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| W/O: | | WORK ORDER CHANGES | | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|--|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector | |
| | | | | | | | | |
| | | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

| QTY -1 | QTY -3 | QTY -5 | QTY -7 | PART NUMBER | DESCRIPTION |
|-----------|-----------|-----------|-----------|---------------|---|
| X | | | | D2650-1 | SKIDTUBE ASSEMBLY |
| | X | | | D2650-3 | SKIDTUBE ASSEMBLY |
| | | X | | D2650-5 | SKIDTUBE ASSEMBLY |
| | | | X | D2650-7 | SKIDTUBE ASSEMBLY |
| 1 | 1 | 1 | 1 | D2600-1-160 | EXTRUSION |
| 1 | | | | D2654-1 | WEB |
| | 1 | | | D2654-3 | WEB |
| | | 1 | | D2654-5 | WEB |
| | | | 1 | D2654-7 | WEB |
| 1 | 1 | 1 | 1 | D2646 | AFT CAP |
| 1 | 1 | 1 | 1 | D2647 | CAP |
| 17 | 18 | 19 | 23 | D2649 | CROSS BOLT SPACER |
| 16 | 18 | 14 | 22 | D2651-1 | PLUG |
| 16 | 18 | 14 | 22 | D2651-3 | O-RING |
| 1 | 1 | 1 | 1 | D2680-041 | NUT PLATE |
| 2 | 2 | | | D3286-1 | DOUBLER |
| 2 | 2 | | | D3286-3 | STUD |
| 42 | 44 | 54 | 60 | ALS7-1032-130 | INSERT (or AKS4-1032-130, ALS4-1032-130, ALS7-1032-130) |
| 2 | 2 | 2 | 2 | AN960JD10L | WASHER |
| 2 | 2 | 2 | 2 | CCR264SS3-3 | RIVET |
| 2 | 2 | 2 | 2 | CR3212-4-03 | RIVET |
| 2 | 2 | 2 | 2 | MS27039-1-08 | SCREW |
| 1 | 1 | 1 | 1 | MS27039-4-06 | SCREW |
| 1 | 1 | 1 | 1 | AN960JD416 | WASHER |
| 52 | 52 | | | CR3212-4-04 | RIVET |

F

F

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
-BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: N/A
- 8) WELD PER DART QSI 004
- 9) DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 10) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- 11) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)
- 12) DRILL Ø0.297 FOR ALS7-1032-130 INSERTS USING TEMPLATE DT8056-1 ON -1 TUBE, DT8056-3 ON -3 TUBE, DT8056-5 ON -5 TUBE, AND DT8056-7 ON -7 TUBE. INSTALL INSERTS AFTER FINISH.
- 13) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

UNCLASSIFIED
SUBJ: DART QSI 005 4.1
NO. 79653 M.L.J
12/02/01

RELEASED
08-17-23/17

| | | | |
|------------|--|--|--------------|
| F | DRAWING UPDATED TO CURRENT STANDARDS. SHT 6 ADDED. ALL SECTION AND DETAIL VIEWS TRANSFERRED TO SHT 6. SHT 1 IN PL PART D2649 QTY UPDATED. SHT 6 SECT C-C GRIND INSTRUCTIONS DELETED FROM NOTE 7 (SEE NCR 239). | AJS | 08.08.08 |
| E | REMOVE CBORE, CHG DRILL, ADD CHAMFER | CP | 06.03.30 |
| D | REDRAW: INCCRP. DE09136/9153/9163 MOD GROUND HANDLING ON D2650-1/-3 | CP | 04.05.17 |
| C | CHANGE HOLE PATTERN AND FRONT END | DS | 97.10.29 |
| B | AS MANUFACTURED CHANGES | DS | 97.06.26 |
| A | NEW ISSUE | DS | 97.03.25 |
| REV. | DESCRIPTION | BY | DATE |
| DESIGN | DS | DART AEROSPACE USA, INC | |
| DRAWN | AdjS | PORT HADLOCK, WA | |
| CHECKED | | DRAWING NO. | REV. F |
| MFG. APPR. | | D2650 | SHEET 1 OF 6 |
| APPROVED | | TITLE | SCALE |
| DE APPR. | | 206/407 SKIDTUBE ASSEMBLIES | NTS |
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| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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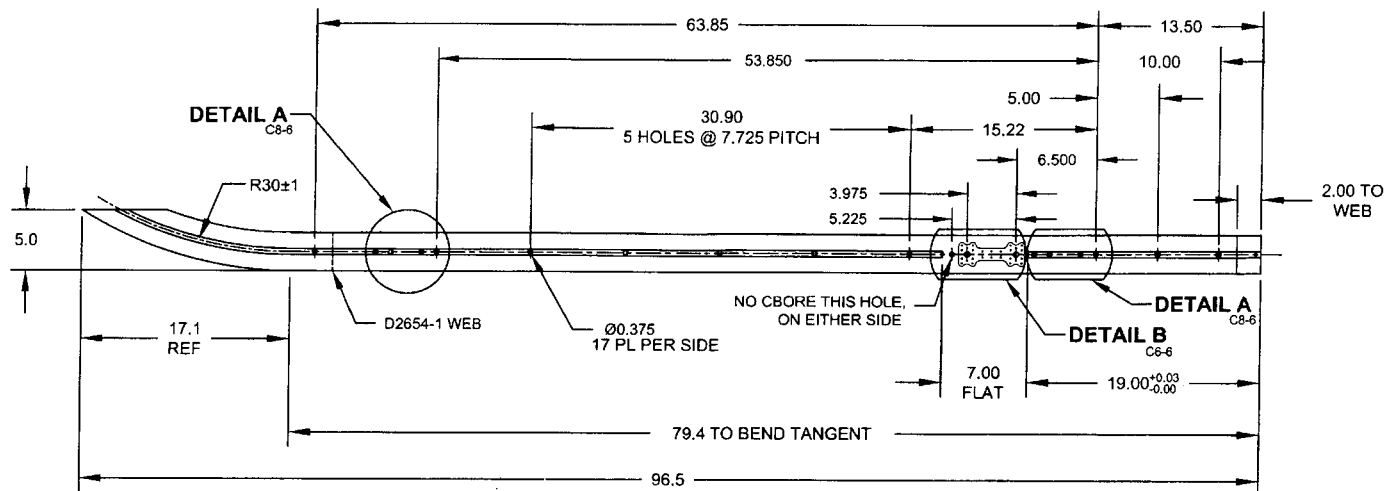
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

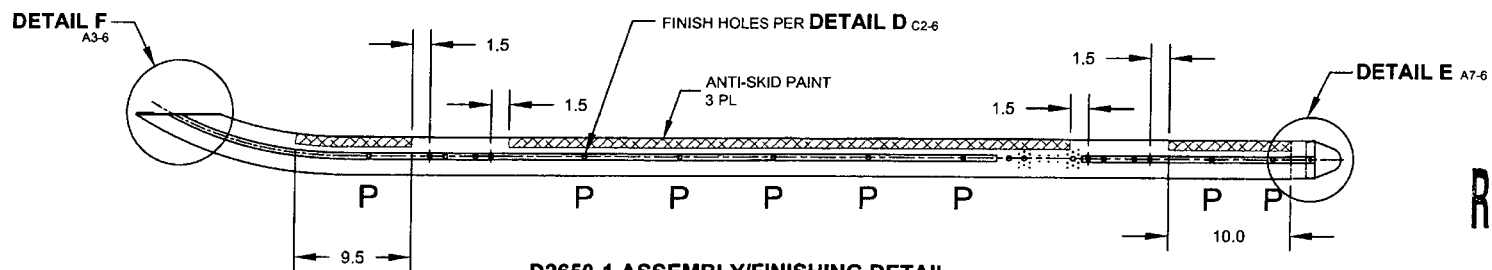
| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

79653



D2650-1 BENDING/DRILLING DETAIL



D2650-1 ASSEMBLY/FINISHING DETAIL

RELEASED
68 09 22 111

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| DESIGN | DS | DART AEROSPACE USA, INC | |
| DRAWN | AJS | PORT HADLOCK, WA | |
| CHECKED | | DRAWING NO. | REV. F |
| MFG. APPR. | | D2650 | SHEET 2 OF 6 |
| APPROVED | | TITLE | SCALE |
| DE APPR. | | 206/407 SKIDTUBE ASSEMBLIES | NTS |
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| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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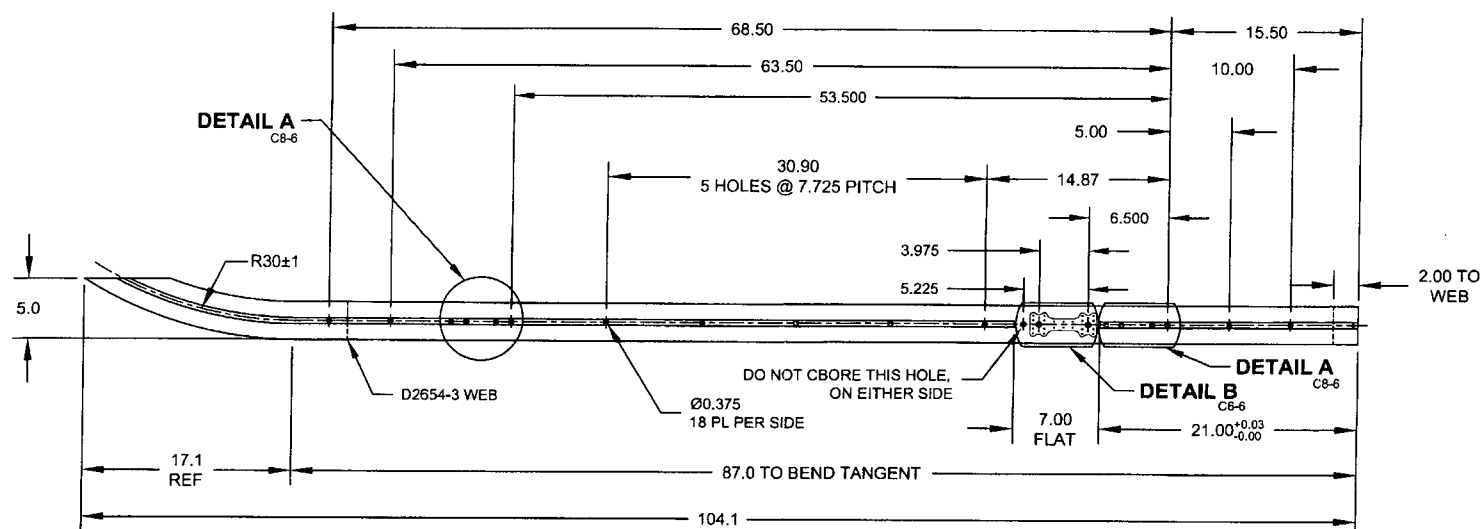
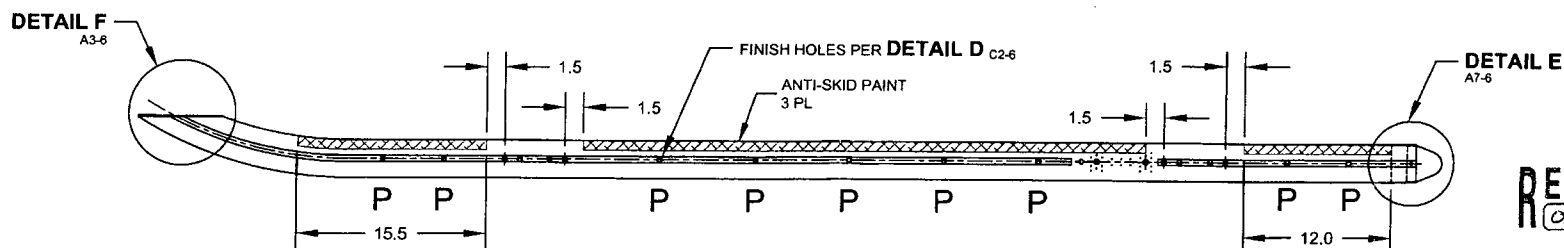
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____





Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

79653

**D2650-3 BENDING/DRILLING DETAIL****D2650-3 ASSEMBLY/FINISHING DETAIL**RELEASED
08-07-22-100

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|---|---|---|--------------|
| DESIGN | DS | DART AEROSPACE USA, INC | |
| DRAWN | AJS | PORT HADLOCK, WA | |
| CHECKED |  | DRAWING NO. | REV. F |
| MFG. APPR. |  | D2650 | SHEET 3 OF 6 |
| APPROVED |  | TITLE | SCALE |
| DE APPR. |  | 206/407 SKIDTUBE ASSEMBLIES | NTS |
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| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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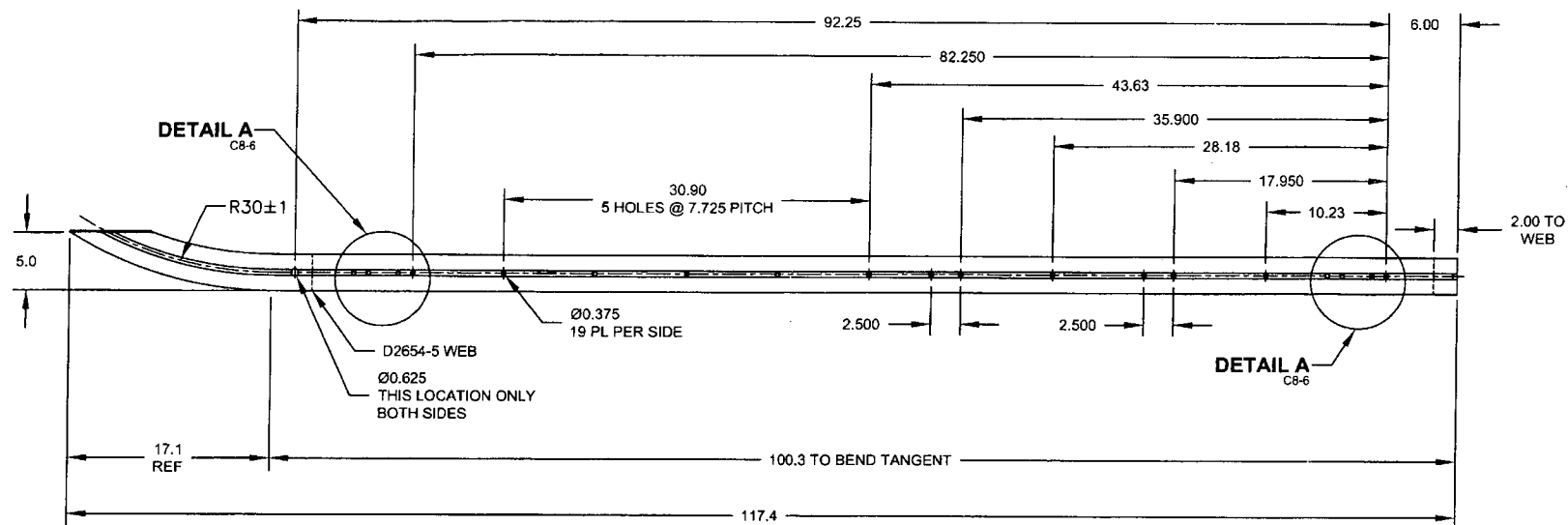
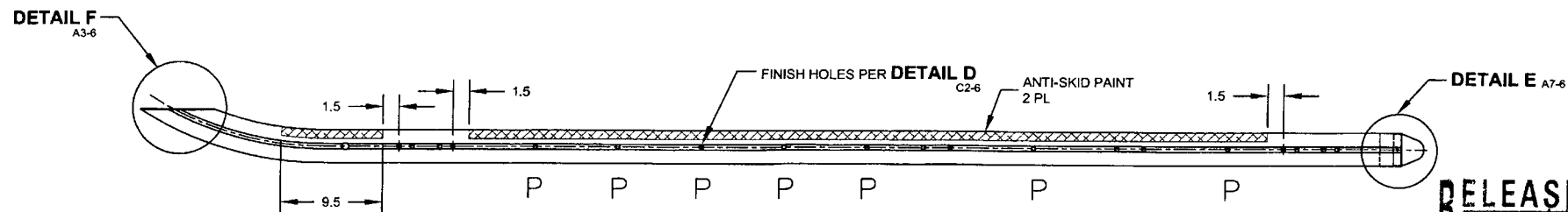
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

79653

**D2650-5 BENDING/DRILLING DETAIL****D2650-5 ASSEMBLY/FINISHING DETAIL**RELEASED
08.08.08

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| DESIGN | DS | DART AEROSPACE USA, INC | |
| DRAWN | AJS | PORT HADLOCK, WA | |
| CHECKED | | DRAWING NO. | REV. F |
| MFG. APPR. | | D2650 | SHEET 4 OF 6 |
| APPROVED | | TITLE | SCALE |
| DE APPR. | | 206/407 SKIDTUBE ASSEMBLIES | NTS |
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| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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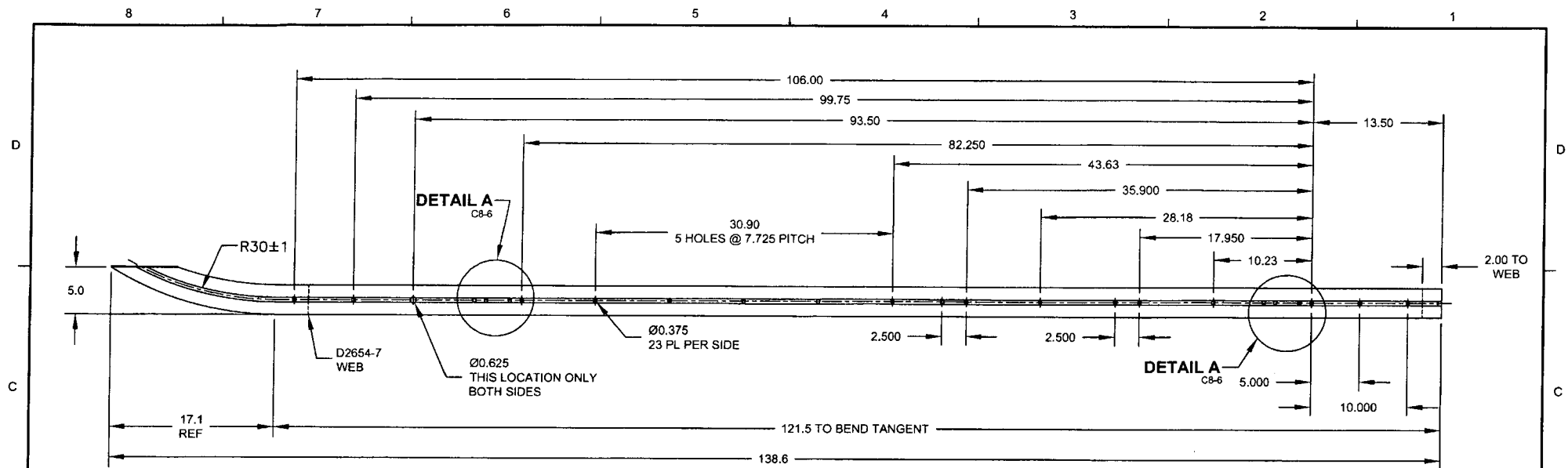
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

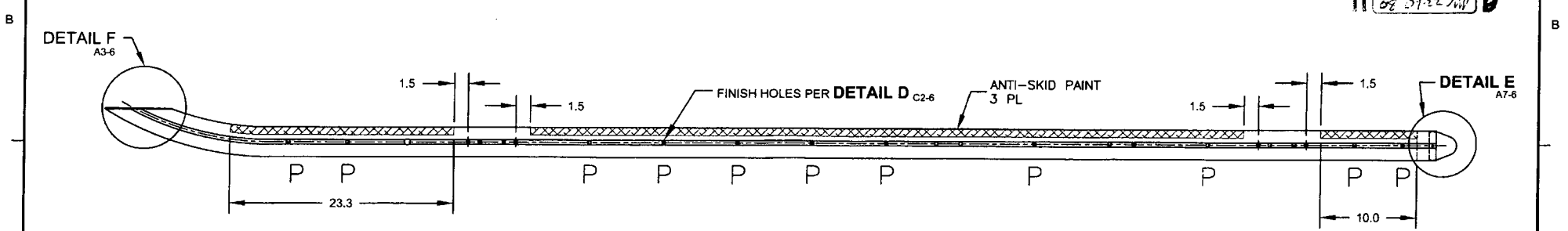
| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

79653



D2650-7 BENDING/DRILL DETAIL



D2650-7 ASSEMBLY/FINISHING DETAIL

RELEASED
08 07 22 1117

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| DESIGN | DS | DART AEROSPACE USA, INC | |
| DRAWN | AJS | PORT HADLOCK, WA | |
| CHECKED | | DRAWING NO. | REV. F |
| MFG. APPR. | | D2650 | SHEET 5 OF 6 |
| APPROVED | | TITLE | SCALE |
| DE APPR. | | 206/407 SKIDTUBE ASSEMBLIES | NTS |
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| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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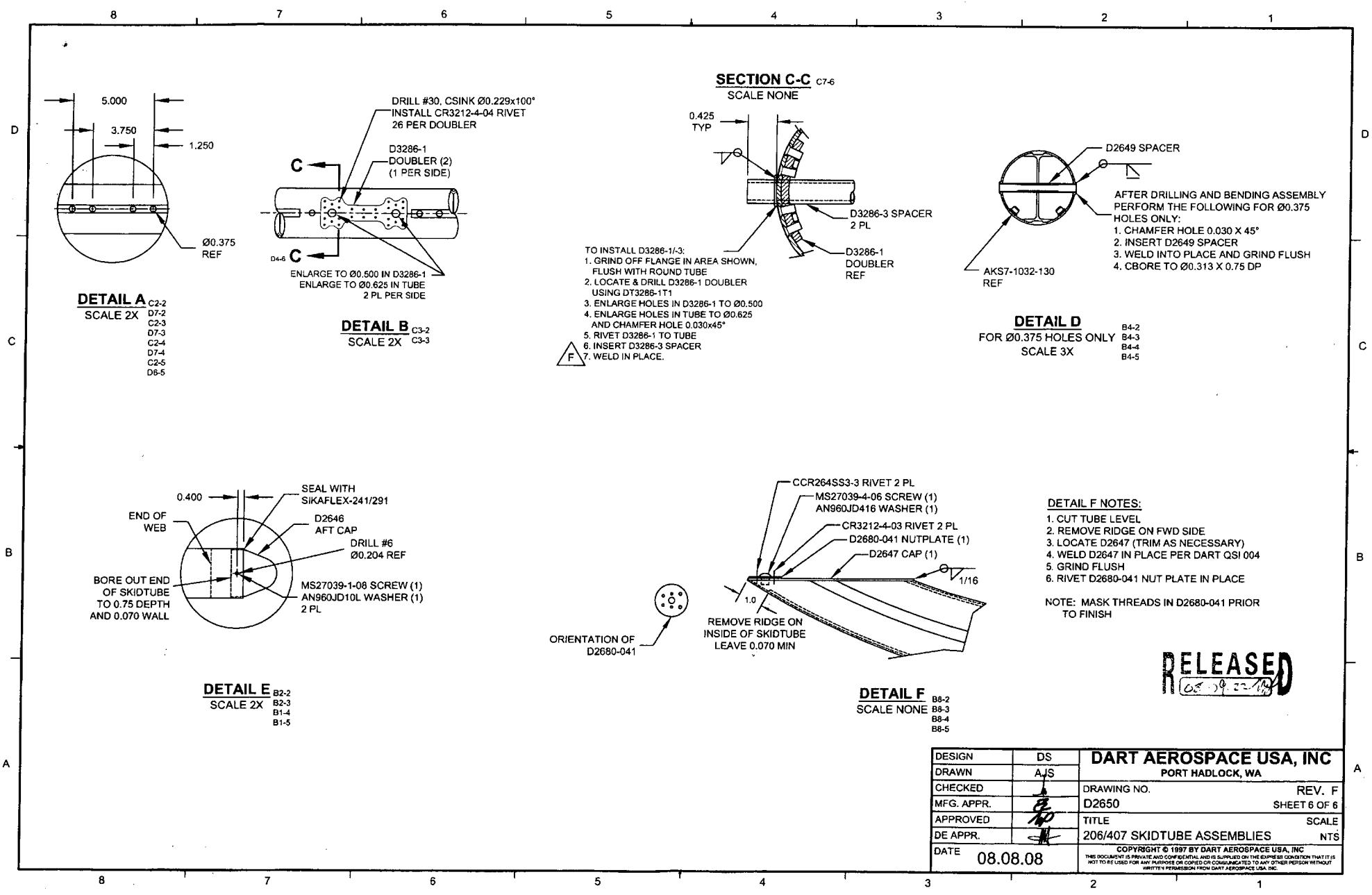
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____





Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

79653



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|---|---|---|--------------|
| DESIGN | DS | DART AEROSPACE USA, INC | |
| DRAWN | AJS | PORT HADLOCK, WA | |
| CHECKED |  | DRAWING NO. | REV. F |
| MFG. APPR. |  | D2650 | SHEET 6 OF 6 |
| APPROVED |  | TITLE | SCALE |
| DE APPR. |  | 206/407 SKIDTUBE ASSEMBLIES | NTS |
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| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries